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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/342,742	06/29/1999	SHANKAR NATARAJAN	CISCP111/107	7044
22434	7590	12/14/2004	EXAMINER	
BEYER WEAVER & THOMAS LLP			LEVITAN, DMITRY	
P.O. BOX 778			ART UNIT	
BERKELEY, CA 94704-0778			PAPER NUMBER	

2662

DATE MAILED: 12/14/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/342,742

Applicant(s)

NATARAJAN ET AL.

Examiner

Dmitry Levitan

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on amendment, filed 11/01/04.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 60-111 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 60-111 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____.
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____.

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Amendment, filed 11/01/2004, has been entered. Claims 60-111 remain pending.

Claim Rejections - 35 USC § 112

1. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

2. Claims 60, 77, 94 and 111 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claims 60, 77, 94 and 111 limitation “quality standards relating to the first communication flow” is unclear, because it is not understood what quality standards are referred to in this limitation.

Claims 68, 69, 85, 86, 102 and 103 limitations “remote reconfiguration/reprovisioning of the operating parameter” is unclear, because the difference between a parameter adjustment, a parameter reprovisioning and a parameter reconfiguration is not understood.

Claims 71, 88 and 105 limitation “the first part of information is compiled by ...network element” is unclear, because the meaning of “compile” is not understood in the context of the claim.

Claim 111 recites the limitation "said computer program product" in line 3. There is insufficient antecedent basis for this limitation in the claim.

Claim Rejections - 35 USC § 102

3. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

4. Claims 60-62, 68, 69, 71-75, 77-79, 85, 86, 88-92, 94-96, 102, 103, 105-109 and 111 are rejected under 35 U.S.C. 102(e) as being anticipated by Abe (US 6,108,304).

Regarding claims 60, 61, 68, 69, 71, 75, 77, 78, 85, 86, 88, 92, 94, 95, 102, 103, 105, 109 and 111, Abe teaches a system a method and a computer program for providing dynamic feedback control of network elements in a data network (network elements EA, EB, EC, ED and network management equipment 200 on Fig. 1 and 4:63-68, 5:1-17), each of said elements having a plurality operating parameters (bandwidth, routing table, buffer status information 10:23-45), comprising:

Receiving a first portion of information relating to a first communication flow between first and second network nodes (EA and EC on Fig. 16), including quality control information, related to the flow, including at least one quality control parameter (receiving the amount of data in the logical queue of network element for a flow, as the size of a logical queue in a buffer is a quality control parameter, because the buffer overflow is directly affecting the flow quality 10:45-50),

Analyzing, using an analysis entity (network management equipment 200), a portion of the quality control information to determine whether quality standards related to the flow

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conform with the predetermined criteria (comparing the queue size to a predetermined value 10:48-50),

Detecting a problem related to the flow based on the analysis (determining that a congestion has occurred 10:49-50 at network management equipment 200 10:40-43),

Resolving the detected problem by generating updated operating parameter information related to the selected portion of network elements (telling nodes to switch PVR from R2 to R6 10:43-45), and

Providing the updated operating parameter information to the selected portion of the network elements to cause them to modify their respective operating parameters to correct the flow problem (updating routing tables for EA and EC to switch from R2 to R6 as shown on Fig. 17 and 10:35-38).

In addition, regarding claim 77, Abe teaches a processor (CPU of the network management equipment 200 5:43-45), an interface for a communication link to the other device in the network (interfaces of the edge nodes 6:52-56) and a memory (memory device 5:47).

Regarding claims 62, 79 and 96, Abe teaches providing an updated operating parameter specifying an adjustment amount related to an operating parameter of an element (updated routing table specifying a route adjustment from R2 to R6 on Fig. 17).

Regarding claims 72, 89 and 106, Abe teaches providing the information (logical queue information) to the network management periodically (at regular intervals 10:46-50).

Regarding claims 73, 90 and 107, Abe teaches providing the information aperiodically in response to the changes in the operating parameter information in the network element of the

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selected network portion (inherently part of the system, because Abe teaches a route switch in response to a route failure as shown on Fig. 16).

Regarding claims 74, 91 and 108, Abe teaches the quality control information including dropped packet information related to the first flow (inherently part of the system, because Abe teaches providing a path error information, indicating that all packets of the path are dropped 10:40-45).

Claim Rejections - 35 USC § 103

5. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

6. Claims 67, 84 and 101 are rejected under 35 U.S.C. 103(a) as being unpatentable over Abe.

Abe substantially teaches the limitations of claims 60, 77 and 94, including comparing the first portion of information with predetermined criteria 10:46-50.

Abe does not teach analysis engine as a policy engine. Official notice is taken that policy engines are well known in the art to analyze actual traffic per stored policies/customer agreements.

It would have been obvious to one of ordinary skill in the art at the time the invention was made to add a policy engine to the system of Abe to improve the system operation with different customer agreements.

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7. Claims 70, 87 and 104 are rejected under 35 U.S.C. 103(a) as being unpatentable over Abe in view of Li (US 5,757,771).

Abe substantially teaches all the limitations of claims 60, 77 and 94 including the quality control information (receiving the amount of data in the logical queue of network element for a flow, as the size of a logical queue in a buffer is a quality control parameter, because the buffer overflow is directly affecting the flow quality 10:45-50).

Abe does not teach modifying the predetermined criteria in response to the analysis of quality control information.

Li teaches modifying the predetermined criteria in response to the analysis of quality control information (dynamically assigning lengths of the queues to support QoS requirements 4:7-11 and 1:35-47).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to add modifying the predetermined criteria in response to the analysis of quality control information of Li to the system of Abe to improve the system utilization of the memory/buffers resources.

8. Claims 76, 93 and 110 are rejected under 35 U.S.C. 103(a) as being unpatentable over Abe in view of Desai (US 5,781,703).

Abe teaches all claim limitations specified in claims 60, 77 and 94.

Abe does not teach using plurality of network controllers. Desai teaches multiple network controllers (data servers 14 on Fig. 1 and col. 3 lines 2-30). It would be obvious to one of ordinary skills in the art at the time the invention was made to use multiple controllers, as suggested by Desai to the method of Abe to improve reliability of the method.

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Conclusion


Any inquiry concerning this communication or earlier communications from the examiner should be directed to Dmitry Levitan whose telephone number is (571) 272-3093. The examiner can normally be reached on 8:30 to 4:30.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Hassan Kizou can be reached on (571) 272-3088. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

DL

Dmitry Levitan
Patent Examiner.
12/03/04.


JOHN PEZZLO
PRIMARY EXAMINER